

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1 (Currently amended): A device for retaining an excess portion of a lead implanted within or on a surface of a brain of a patient, the device comprising:

a burr hole ring configured to be secured to a skull of the patient;

and

a lead retainer extending from the burr hole ring, the lead retainer being configured to releasably retain a plurality of different sections of the excess portion of the lead. ~~configured to store at least a section of the excess portion of the lead.~~

Claim 2 (Original): The device in claim 1 wherein the lead retainer is connected to the burr ring by an integral living hinge.

Claim 3 (Original): The device of claim 2 wherein the integral living hinge permits relative movement between the lead retainer and the burr hole ring between expanded and collapsed positions.

Claim 4 (Original): The device of claim 1 wherein the lead retainer is pivotally connected to the burr ring.

Claim 5 (Original): The device of claim 4 further comprising a pivot hinge to selectively enable the lead retainer to move between expanded and collapsed positions.

Claim 6 (Cancelled)

Claim 7 (Currently amended): The device of claim 1 ~~claim 6~~ wherein the lead retainer is structured and arranged to releasably retain the excess portion of the lead in one of a plurality of different coiling configurations.

Claim 8 (Original): The device of claim 1 wherein the lead retainer is formed from a resilient material.

Claim 9 (Currently amended): The device of claim 1 wherein the lead retainer comprises a plurality of grooves to releasably retain the ~~the~~ plurality of different sections of the lead, each groove having a width that is less than an outside diameter of the lead, the width of each groove configured to accept the lead by increasing the width of the groove a distance at least as great as the outside diameter of the lead when a force is being applied to insert the lead into one of the grooves.

Claim 10 (Original): The device of claim 9 wherein each groove is configured to store multiple sections of the excess portion of the lead.

Claim 11 (Currently amended): The device of claim 1 further comprising the ~~[[a]]~~ plurality of lead retainers extending from the burr ring.

Claim 12 (Currently amended): A device for retaining an excess portion of a lead that is implanted within or on a surface of a brain of a patient wherein access to the brain is provided through a burr hole in a skull of a patient, the device comprising:

a sleeve having an aperture extending therethrough, the sleeve being configured to be secured to a wall of the burr hole wherein the aperture is in general alignment with the burr hole; and

a flange extending from the sleeve, the flange having means for at least partially retaining a plurality of different sections ~~at least a section~~ of the excess portion of the lead.

Claim 13 (Original): The device of claim 12 wherein the retaining means includes at least a pair of tabs extending from an outside surface of the flange, the tabs configured to form a groove therebetween to retain at least a section of the excess portion of the lead.

Claim 14 (Currently amended): The device of claim 12 wherein the retaining means includes a plurality of tabs extending from an outside surface of the flange, the tabs configured to form a groove between adjacent tabs to thereby form a plurality of grooves to retain the plurality of different ~~multiple~~ sections of the excess portion of the lead.

Claim 15 (Currently amended): A device for retaining an excess portion of a lead that is implanted within or on a surface of a brain of a patient wherein access to the brain is provided through a burr hole in a skull of a patient, the device comprising:

a burr hole ring having an aperture configured to receive the lead therethrough and an outside surface, the burr hole ring being configured to be secured to the skull wherein the aperture in the burr hole ring is in general alignment with the burr hole, the outside surface of the burr hole ring having means for retaining a ~~section~~ plurality of different sections of the excess portion of the lead.

Claim 16 (Currently amended): The device of claim 15 wherein the retaining means includes a groove system disposed in the outside surface of the burr hole ring dimensioned to accommodate a [[the]] section of the excess portion of the lead.

Claim 17 (Original): The device of claim 16 wherein the groove system includes a spiral groove that extends from the aperture to at least one outlet at a periphery of the outside surface of the burr hole ring such that the excess portion of the lead can be stored in at least one loop in the groove system.

Claim 18 (Currently amended): The device of claim 16 wherein the groove system includes a plurality of concentric[[,]] grooves extending circumferentially around the outside surface of the burr hole ring, and at least one generally radial groove in the outside surface communicating with the plurality of concentric grooves, the radial groove extending to an outlet at a periphery of the outside surface of the burr hole ring.

Claim 19 (Original): The device of claim 16 wherein the groove system is defined by a continuous spiral groove extending around the outside surface of the burr hole ring, and at least one generally radial groove intersecting the spiral groove and leading to at least one outlet at a periphery of the outside surface of the burr hole ring wherein the spiral groove commences adjacent to the aperture in the burr hole ring.

Claim 20 (Original): The device of claim 15 wherein the burr hole ring is formed from a resilient material.

Claim 21 (Original): The device of claim 15 wherein at least a section of the excess portion of the lead is retained in the retaining means in one of a plurality of different coiling configurations.

Claim 22 (Currently amended): A device for managing an excess portion of a lead implanted within or on a surface of a brain of a patient, the device configured to be used in conjunction with a burr hole ring having a flange and a sleeve extending from the flange, the device comprising:

a ring having an aperture disposed therein for receiving the sleeve portion or the burr ring; and

at least one lead retainer extending from the disk to store ~~at least a~~ plurality of different sections ~~section~~ of the excess portion of the lead.

Claim 23 (Original): The device of claim 22 further comprising a plurality of lead retainers disposed at spaced apart locations with respect to the ring.

Claim 24 (Currently amended): The device of claim 22 wherein the lead retainer comprises a plurality of grooves to releasably retain the ~~the~~ plurality of different sections of the lead.

Claim 25 (Currently amended): A device for managing an excess portion of a lead implanted within a brain of a patient wherein access to the brain is provided through a burr hole in a skull of the patient, the device configured to be used in conjunction with a burr hole ring having an aperture for receiving a lead therethrough, the device comprising:

 a disk having an aperture disposed therein, the aperture in the disk provided for general alignment with the burr hole and burr hole ring aperture; and
 at least one lead retainer extending radially outward from the disk to store ~~at least a~~ plurality of different sections ~~section~~ of the excess portion of the lead.

Claim 26 (Currently amended): A method of retaining an excess portion of a lead implanted within or on a surface of a brain of a patient wherein access to the brain is provided through a burr hole in a skull of the patient, the method comprising:

 securing a burr hole ring to the skull of the patient, the burr hole ring having at least one lead retainer; and
 inserting a plurality of different sections ~~at least a section~~ of the excess portion of the lead into the lead retainer to retain the lead.

Claim 27 (Original): The method of claim 26 further comprising the step of arranging the lead around the aperture in the burr hole device in one of a plurality of coiling configurations.

Claim 28 (Original): The method of claim 27 wherein the coiling configuration reduces a change in temperature at a contact of the lead when the patient is undergoing an MRI procedure.

Claim 29 (Original): A method of retaining an excess portion of a lead implanted within or on a surface of a brain of a patient wherein access to the brain is provided through a burr hole in a skull of the patient, the method comprising:

securing a burr hole ring to the skull of the patient, the burr hole ring having a plurality of lead retainers; and

inserting a plurality of different sections of the excess portion of the lead into the plurality of retainers to store the excess portion of the lead.

Claim 30 (Original): The method of claim 29 wherein the plurality of different sections of the excess portion of the lead are inserted into the plurality of retainers in a manner such that the excess portion of the lead is coiled around the burr hole.

Claim 31 (Original): The method of claim 30 wherein the excess portion of the lead is coiled around the burr hole in one loop.

Claim 32 (Original): The method of claim 30 wherein the excess portion of the lead is coiled around the burr hole in a plurality of loops.

Claim 33 (Original): A method of retaining an excess portion of a lead implanted within or on a surface of a brain of a patient wherein access to the brain to implant the lead is provided through a burr hole in a skull of the patient, the method comprising:

securing a retaining device to a skull of the patient, the retaining device having a one or more lead retainers; and

inserting one or more different sections of the excess portion of the lead into the one or more retainers to store the excess portion of the lead.

Claim 34 (Original): The method of claim 33 wherein the one or more different sections of the excess portion of the lead are inserted into the one or more lead retainers thereby forming a coiling configuration.

Claim 35 (Original): The method of claim 33 wherein the retaining device is secured to the skull at a spaced-apart location from the burr hole.

Claim 36 (Original): A method of retaining an excess portion of a lead implanted within or on a surface of a brain of a patient in a configuration that reduces a change in temperature at a contact of the lead when the patient is undergoing an MRI procedure, wherein access to the brain is provided through a burr hole in a skull of the patient, the method comprising:

securing a burr hole ring to the skull of the patient, the burr hole ring having a plurality of lead retainers; and

inserting a plurality of different sections of the excess portion of the lead into the plurality of lead retainers to retain the excess portion of the lead.

Claim 37 (Original): The method of claim 36 where the insertion step includes:

arranging the excess portion of the lead around the burr hole; and
placing sections of the excess portion of the lead into the plurality of retainers.

Claim 38 (Original): The method of claim 37 where the arrangement step includes forming the excess portion of the lead into a plurality of loops.

Claim 39 (Original): The method of claim 37 wherein the change in temperature decreases as the number of loops of the excess portion of the lead coiled around the burr hole increases.

Claim 40 (Original): The method of claim 36 wherein the lead is associated with a device selected from the group consisting of a neurostimulation lead, IPG, intracranial pressure monitor, CSF diversion device, fixed rate shunting device, programmable shunting device, and implantable microinfusion pump.

Claim 41 (Original): A method of retaining an excess portion of a lead implanted within or on a surface of a brain of a patient in a configuration that reduces a change in temperature at a contact of the lead when the patient is undergoing an MRI procedure, wherein access to the brain is provided through a burr hole in a skull of the patient, the method comprising:

inserting a retaining device within the patient at a spaced-apart location from the burr hole, the retaining device having a plurality of lead retainers; and

inserting a plurality of different sections of the excess portion of the lead into the plurality of lead retainers to retain the excess portion of the lead.

Claim 42 (Original): An apparatus comprising:

a substrate formed from biocompatible elastomer suitable for implantation into human or animal tissue;

a lead retainer supported by the substrate, the lead retainer configured to receive and releasably retain an excess portion of an implanted lead in a configuration selected to reduce heating of at least a portion of the implanted lead during an MRI procedure.

Claim 43 (Original): The apparatus of claim 42 wherein the substrate defines a central aperture sized to receive a burr hole device.

Claim 44 (Original): The apparatus of claim 42 wherein the substrate includes:

a flange having a diameter larger than a burr hole diameter; and
a sleeve extending from the flange having a diameter slightly less than the diameter of a burr hole provided in a skull of a patient.

Claim 45 (Original): The apparatus of claim 42 wherein the substrate defines a cavity sized to at least partially receive a medical treatment device configured for operative communication with the implanted lead.